

RECEIVED MAY 21, 2009

0082955

Analytical Data Package Prepared For

CH2M Hill Plateau Remediation Company

Analysis Provided By

*TestAmerica*

2800 George Washington Way

Richland WA, 99354

(509)375-3131

Assigned Laboratory Code: TARL

SDG Number: W05651

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SEP 02 2009

**EDMC**

## Certificate of Analysis

CH2M Hill Plateau Remediation Company  
P.O. Box 1600  
Mail Stop – R3-60  
Richland, WA 99352

May 21, 2009

Attention: Mike Neely

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SAF Number	:	F08-039
Date SDG Closed	:	May 7, 2009
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W05651
Data Deliverable	:	24 Hour / 15 Day

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### CASE NARRATIVE

#### I. Introduction

On May 7, 2009 one sample was received at TestAmerica for chemical analysis. Upon receipt, the sample was assigned to lot J9E070245 and assigned the following laboratory ID number to correspond with the CH2M specific ID:

<u>CH2M ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B20904	LCJRX	WATER	5/7/09

#### II. Sample Receipt

The sample was received in good condition and no anomalies were noted during check-in.

#### III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.



The requested analyses were:

**Chemical Analysis**  
Chromium by EPA method SW8466010

**IV. Quality Control**

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

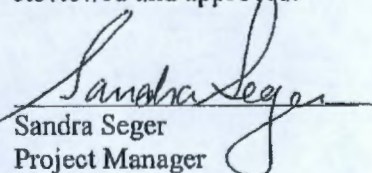
**V. Comments**

**Chemical Analysis**  
Chromium by EPA method SW8466010

The LCS, batch blank, sample and duplicate sample results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

  
Sandra Seger  
Project Manager

Analysis Date: 5/7/2009  
 QC Batch #: 9127468  
 Analyte: Chromium

Sample ID	Comment	Client ID	Instrum't Reading (mg/L)	Final Vol. (L)	Dilution Factor	Recov'd Cr (mg/L)	Results (ug/L)	Yield	Adjusted MDL ( ug/L)	U Qualified
J9E070245-001	10:1 dilution	B20904'	0.0299	1	10	0.299	299		6	
J9E070245-001-S	10:1 dilution MS	B20904'	0.937	1	10	9.37	9370	90.71%	6	
J9E070245-001-D	10:1 dilution MSD	B20904'	0.9203	1	10	9.203	9203	89.04%	6	
J9E070245-001-X	10:1 dilution - Duplicate	B20904 DUP'	0.0295	1	10	0.295	295		6	
J9E070000-260-B	Reagent Blank		-0.0001	0.05	1	-0.0001	<.6		0.6	U
J9E070000-260-C	LCS		0.9916	0.05	1	0.9916	991.6	99.16%	0.6	



Batch Number(s): 9127468				
Lab Sample Numbers or SDG: W051051   J9 E070245				
Method/Test/Parameter: Metals				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>A. Initial Calibration</b>	✓			✓
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
<b>B. Continuing Calibration</b>	✓			✓
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
<b>C. Sample Analysis</b>				
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?	✓			✓
2. Were all sample holding times met?	✓			✓
<b>D. QC Samples</b>	✓			✓
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?			✓	N/A
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?	✓			✓
5. ICP only: One serial dilution performed per SDG?	✓			✓
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	N/A
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?	✓			✓

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>E. Other</b>	✓			N/A
1. Are all nonconformances included and noted?				
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response:

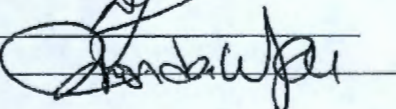
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Analyst: \_\_\_\_\_  
Second-Level Review: 

Date: 5/7/09  
Date: 5/8/09



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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F08-039-223		PAGE 1 OF 1	
COLLECTOR NCO Samplers - <i>Maalen</i>		COMPANY CONTACT WIDRIG, DL		TELEPHONE NO. 376-2858		PROJECT COORDINATOR WIDRIG, DL		PRICE CODE 1A	
SAMPLING LOCATION DR-5 Filtered		PROJECT DESIGNATION DR-5 GW Treatment Facility Regen Waste Characterization - Special Sample				SAF NO. F08-039		AIR QUALITY <input type="checkbox"/> DATA TURNAROUND 24 Hours / 15 Days	
ICE CHEST NO. <i>GRP-05-010</i>		FIELD LOGBOOK NO. <i>WJF-U-4284</i>		ACTUAL SAMPLE DEPTH <i>N/A</i>		COA 300113ES10		METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A				BILL OF LADING/AIR BILL NO. N/A			
<b>MATRIX*</b> A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other		POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)		PRESERVATION HNO3 to pH <2					
				TYPE OF CONTAINER G/P					
				NO. OF CONTAINER(S) 1					
				VOLUME 500mL					
		SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS ICP Metals - 6010A (TAL) (Chromium)					
SAMPLE NO.		MATRIX*		SAMPLE DATE		SAMPLE TIME			
B20904 <i>LCJXR</i>		WATER		5-7-09		0830		✓	
CHAIN OF POSSESSION				SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		<p>** The field samplers are requested to filter the metals bottle with a 0.45 micron filter and preserve with HNO3 to a pH less than 2.</p> <p>** The 200 Area S&amp;GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.</p> <p>** The Laboratory is to pay special attention to Special Instructions for proper processing of individual samples.</p> <p><i>W05le51</i>  <i>JRE 070235</i> <i>J9D0702NS</i>  <i>Due 5/31/09</i> <i>Pw 5/31/09</i></p>	
<i>Santa Monica</i>		<i>5/29/09</i>		<i>WLANE TALK</i>		<i>5/29/09</i>			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
LABORATORY SECTION		RECEIVED BY				TITLE			
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD				DISPOSED BY			
						DATE/TIME			



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## Sample Preparation/Analysis

Balance Id:

108302, CH2M Hill Plateau Remediation DOE RL  
, Waste Management Federal Servi88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION  
EA Chromium, Hexavalent (7196A)  
01 STANDARD TEST SET

Pipet #:

AnalyDueDate: 05/08/2009

Sep1 DT/Tm Tech:

Batch: 9127468 WATER ug/L  
SEQ Batch, Test: None All Tests: 9127468 88EA,

PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 LCJXR-1-AA								
J9E070245-1-SAMP								
05/07/2009 08:30		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
2 LCJXR-1-AC-S								
J9E070245-1-MS								
05/07/2009 08:30		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
3 LCJXR-1-AD-D								
J9E070245-1-MSD								
05/07/2009 08:30		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
4 LCJXR-1-AE-X								
J9E070245-1-DUP								
05/07/2009 08:30		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
5 LCJ0P-1-AA-B								
J9E070000-468-BLK								
05/07/2009 08:30		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
6 LCJ0P-1-AC-C								
J9E070000-468-LCS								
05/07/2009 08:30		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

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5/7/2009 2:18:57 PM

### Sample Preparation/Analysis

Balance Id: \_\_\_\_\_

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION  
EA Chromium, Hexavalent (7196A)  
01 STANDARD TEST SET

Pipet #: \_\_\_\_\_

AnalyDueDate: 05/08/2009

Sep1 DT/Tm Tech: \_\_\_\_\_

Batch: 9127468  
SEQ Batch, Test: None

ug/L

Sep2 DT/Tm Tech: \_\_\_\_\_

Prep Tech: \_\_\_\_\_



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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Comments:

All Clients for Batch:

108302, CH2M Hill Plateau Remediation DOE RL

Waste Management Federal Servi, SS , 29754

LCJXR1AA-SAMP Constituent List:

LCJXR1AC-MS Constituent List:

LCJXR1AD-MSD:

LCJOP1AA-BLK:

LCJOP1AC-LCS:

LCJXR1AA-SAMP Calc Info:

Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

LCJXR1AC-MS Calc Info:

Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

LCJXR1AD-MSD:

Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

LCJOP1AA-BLK:

Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

LCJOP1AC-LCS:

Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

Approved By \_\_\_\_\_

Date: \_\_\_\_\_